REMARKS

Obvious typographical errors have been corrected on pages 2 and 6 of the specification.

Claims 1, 4, 6, and 11 remain in the case. Independent claims 1, 4, and 11 have been amended, as suggested by the Examiner, to more precisely define the pore structure of the carbon material as having a specific surface area of less than 400 m^2/g. Support for this limitation is set forth in Table 1 of the specification on page 17. The table shows that examples 1 and 2 having a specific surface area less than 400 m^2/g have significantly improved capacitance density as compared with typical specific surface areas for prior art materials. The carbon materials having 400 and 300 m^2/g have superior capacitance density as compared with the comparative examples. The carbon material with the specific surface area of 300 m^2/g had better capacitance density than the material with a specific surface area of 400 m^2/g. This is explained clearly on page 17 at lines 8 to 16.

The Examiner has rejected the claims as unpatentable in view of Miyabayashi et al. Reconsideration of the amended claims is respectfully requested. There is no suggestion in Miyabayashi et al. to maintain the specific surface area of the carbon material less than 400 m^2/g. Table 1 in the Applicants' specification brings out the importance of this limitation. Miyabayashi et al. only teaches a lower limit for specific surface area which is consonant with the prior art teaching explained by the Applicants at page 2, lines 3 to 16 of the specification.
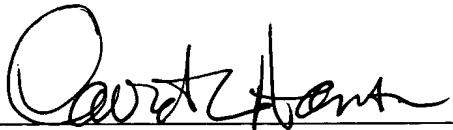
It is respectfully urged that the specification of the pore size in the claims overcomes the rejections based upon 35 U.S.C. §§ 102, 103 and 112. The term graphite-like relates to the general crystal structure and the difference from graphite is quantified by the interlayer distance. The difference between the pore structure of the carbon material claimed

and that used in the prior art is quantified by maximum specific surface area. The significance of these limitations is brought out in Table 1 of Applicants' specification.

In view of the foregoing amendments and remarks, it is urged that this application is now in condition for allowance. It is requested that the amendments be entered for purposes of appeal.

Respectfully submitted,

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MARKED-UP VERSION OF SUBSTITUTE PARAGRAPHS

First Full Paragraph on Page 2 of the Specification.

In the [part] past, in order to make the capacitance of the EDLC as large as possible, attempts have been made to increase the surface area of activated carbon. For example, Japanese Patent Laid-Open No. 78513/1988 proposes a technique for obtaining activated carbon by mixing potassium hydroxide into petroleum cokes and calcinating the mixture. It is said that the specific surface area which was about 1500 m^2/g at maximum in the past could be increased to 2000-3500 m^2/g. However, we have found that even if activated carbon whose specific surface area is increased is used as a polarized electrode material, limitations are imposed on the obtainable capacitance since the surface area per unit volume decreases by strong activation.

Paragraph Bridging Pages 6 and 7 of the Specification.

In the carbonaceous material used in the present invention, the interlayer distance d_{002} is 0.365 to 0.385 nm, which is considerably greater than that of graphite. However, the diffraction peak of C_{002} at the interlayer distance d_{002} has a high integrated intensity. Hence, it can be seen that this carbon material has crystallites of graphite-like carbon. In Fig. 1, X-ray diffraction curve A is obtained from a material that is under carbonization. X-ray diffraction curve B is derived from activated carbon for the prior art EDLC, the activated carbon having been deeply activated until a specific surface area of [2000 cm^2/g] 2000 m^2/g was obtained. X-ray diffraction curve C is obtained from a carbon material in accordance with the present invention, the carbon material being activated shallowly.

MARKED-UP VERSIONS OF CLAIMS 1, 4, AND 11

1. (Twice Amended) A carbon material for an electric double layer capacitor, comprising:

crystallites of graphite-like carbon produced by activating a carbon material with an alkali, said crystallites having interlayer distances of 0.365 to 0.385 nm <u>and a specific surface area of less than 400 m²/g</u>.

4. (Twice Amended) An electric double layer capacitor having polarized plates immersed in an organic electrolyte, said electric double layer capacitor comprising:

said polarized plates being made of a carbon material comprising crystallites of graphite-like carbon produced by activating a carbon material with an alkali, said crystallites having interlayer distances of 0.365 to 0.385 nm <u>and a specific surface area of less than 400 m²/g</u>.

11. (Twice Amended) An electric double layer capacitor comprising:

an electrolyte consisting of a nonaqueous solvent;

polarized plates made of a carbon material activated with an alkali having interlayer distances d_{002} of 0.365 to 0.385 nm <u>and a specific surface area of less than 400 m²/g</u>; and

a dimension-limiting structure in which said electrolyte and said plates are held, said dimension-limiting structure acting to limit expansion of said plates on application of a voltage.